COMMUNITY COLLEGE FUNDING FORMULA STUDY: THE COST OF EDUCATION (COE) FACTOR

A Report Prepared for the
Legislative Finance Committee
(As requested in HB 2 of the 2005 Session)

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INTRODUCTION

During the 2005 legislative session, the Joint Appropriations Subcommittee on Education expressed concern about the community college assistance program funded in HB2, specifically that the cost of education factor (COE) of the formula may no longer reflect the actual costs of providing education at Montana's three community colleges. This formula and the cost of education factor (COE) were originally adopted following a legislative study conducted in 1981[1] (codified at 20-15-301 MCA, et. seq.), and within the context of this funding formula the COE factor establishes the foundation upon which the state funding level rests.

Since the adoption of the 1981 funding formula, the COE factor has been adjusted each biennium using various methodologies, most unrelated to actual cost data, as there has been no universal index for making inflationary or other adjustments. Also, in 24 years, the factor has never been adjusted based specifically upon a focused look at the actual costs that Montana's community colleges incur in providing resident students with an undergraduate education.

These issues were first raised as part of the Legislative Fiscal Division (LFD) budget analysis of the 2007 biennium budget proposed by the Governor. During the 2005 session, the Joint Appropriations Subcommittee on Education heard testimony from the community colleges and reviewed the funding formula calculations, considering the issues raised related to the COE factor. Given the tight schedule for considering HB 2 appropriations during the legislative session, the subcommittee decided that there was insufficient time to consider other options to the existing calculations for the COE factor.

Therefore, the subcommittee and the 2005 legislature expressed concern about the validity for the foundation of this funding formula, circumvented that formula in approving an additional one-time-only special community college appropriation, and inserted the following language into HB 2 that was approved by the legislature:

> "Community College Assistance Special funding is appropriated as a block grant allocation, rather than following the standard three-factor funding formula, **because the legislature has concerns about the cost of education factor** [bold added]. The legislature requests that the legislative finance committee make it a high priority to look at the community college funding formula and statutes and report to the 2007 legislature on recalibrating the cost of education factor and other funding issues."

This language essentially requests an interim review of what the legislature already considers a problematic COE factor in order to look in depth at the history, the precise process, and the actual formula calculations, with the objective of identifying potential legislative options to address these concerns.

In order to comply with this HB 2 language, staff of the Legislative Fiscal Division (LFD), under the direction of the Legislative Finance Committee[2] (LFC), has completed an interim study looking specifically at each community college in an attempt to determine if the COE factor is indeed flawed and, if so, to identify formula options whereby a more accurate calculation of the cost of education may be determined by the legislature. This study included representatives from the executive budget office (OBPP) and from the Office of the Commissioner of Higher Education (OCHE)[3].

This working group conducted a site-visit to each community college in an effort to gather information and data about each school and establish:

- Is there a problem with the COE factor in the community college funding formula, specifically has the factor lost the relevance intended by the legislature when it was proposed in the 1981 funding study, adopted by the legislature and subsequently used in HB2 calculations?

- If there is a problem with the COE factor, identify those problems and the consequences.

- Identify options for legislative consideration that would address the problems identified with the COE factor, specifically models to recalibrate the COE calculation and models to adjust the COE factor in subsequent biennia.

It has been the intention of LFD staff that this interim study would be limited to consideration of the COE factor in the community college assistance funding formula. The legislature has expressed satisfaction with the other two factors of the funding formula as well as satisfaction for the overall formula model. Only the accuracy of the cost of education calculation itself and the method used to adjust this factor each biennium bring legislative concern and the HB 2 language authorizing this study.

Following the site visits to all three community colleges[4], research was completed and this report was drafted and circulated to participants at each college for review and comment, as well as forwarded to the Montana Board of Regents for review and comment. The Board of Regents, at 20-15-103, MCA, exercises supervision and coordination authority over the community colleges.

During the course of the research to support this study, comparative models were investigated including a peer-state comparison of funding formulas, and simulated cost of education calculations were run using the "Methodology for Identifying the Cost of Delivering Undergraduate Education." This methodology was devised through a national project completed in 2002 by the National Association of College and University Business Officers (NACUBO). Representatives from Montana State University participated in the NACUBO project and helped to devise that model for calculating the cost of education. Results from the NACUBO model calculations will be discussed later in this report.

Finally, during the course of this study the working group maintained a focus and commitment to a set of overarching policy considerations that drove the original 1981 funding study and the subsequent adoption of the existing community college funding formula, including the COE factor. These policy considerations include:

- Transparency. A primary policy goal stated in the 1981 funding study was that the funding formula should be easily understood and would not "…substantially increase monitoring requirements…" (Page 8). The funding statute also requires that each session of the legislature should "debate and fix" the state percentage share of funding and state that percentage in HB 2. In order for public policy to be clearly stated by a percentage, it would seem that a transparent formula is essential so that legislators understand precisely what that percentage represents.

- Equalize state support. The legislative concern that drove the launch of the 1981 funding study was the concern that the prior formula, known as the 65:35 ratio, resulted in vast differences in the level of state support among the three community colleges. Therefore, the three-factor formula was also intended to ensure equalized state support among the colleges.

- Local fiscal control. The legislature narrowed their funding formula options to two competing models in 1981, the three-factor formula and the comprehensive budget analysis model. Ultimately the three-factor formula was preferred because of its transparency and its ability to equalize state support. But this formula was also adopted in large part because the legislature wanted to ensure that community colleges remain local institutions with ultimate fiscal responsibility resting with the local board of trustees. It is the three-factor formula model that legislators selected to maximize local control and not "negate the role of the trustees in college management" (Page 4). Trustees are, by statute, elected by the local district voters.

Given the prominence of these overarching policy goals in the 1981 study and subsequent legislation, the working group in this study of the COE factor maintained a focus on these goals during the site visits to each college and during all aspects of research and design of legislative options.

HISTORY OF STATE FUNDING FOR COMMUNITY COLLEGES

Prior to the current three-factor funding formula, state funding for the community colleges was determined using the "65:35" formula. Under this model, the stated objective and policy goal was that state funding would support 65 percent of the cost of education at each community college and the remaining 35 percent would be funded with local mill-levy revenue and student tuition.

During the 1981 biennium budget deliberations, however, the legislature expressed concern that the "65:35" formula had gotten too complex, that the statute was "inconsistent," and that each community college was applying the calculations differently, with the end result being "widely varying impacts" on the level of state support for each college. Typically a 65/35 funding split was not the actual end product of this model. This legislative concern about a lack of equity in state funding led to the passage of HJR 58 during the 1979 legislative session, funding the subsequent Legislative Finance Committee interim funding study.

That study recommended, and the legislature agreed by approving the community college funding statute (MCA 20-15-301, et. seq.), that the new formula should be as simple as possible (transparent) so that it could be understood and applied in the same manner at each school. This meant applying averages for all schools rather than individual cost factors for each college, as well as accepting average costs for all courses rather than establishing technical vs. non-technical course cost differences. Again, the stated goal was to "equalize state support based upon FTE count" without regard to course content.

Thus, the three factor or "unit-rate" model was adopted, which involves multiplying three factors in order to determine the general fund budget for each community college. These factors are:

- Enrollment Projections aggregated for all three colleges
- Cost of Education average for each FTE student
- State Percentage Support of the Cost of Education

Stated mathematically, this funding formula looks like the following:

- Student Enrollment x Cost of Education x State Percent Share = State General Fund Budget
  (e.g. 100 Students x $100 Cost Per Student x 53% State Share = $5,300 General Fund Budget)

The total state general fund budget is then appropriated to each college based upon the student enrollment level at each of the three community colleges.

Enrollment projections are provided by the community colleges and the legislature has the authority to accept those or make an independent calculation. Over the 25-year history of this formula, the enrollment projections model has varied. For some budgets the final projections were based upon a two-year or three-year average, while other budgets have accepted simple projections for each fiscal year of that specific biennium. For the current 2007 biennium, actual annual enrollment projections were accepted, but the legislature approved a reversion statute in the 2001 legislative session so that if enrollment falls below projections, that portion of general fund exceeding actual enrollment reverts back to the general fund account, in accordance with 17-7-142, MCA.

The original "Cost of Education" (COE) factor was determined in the 1983 biennium budget by looking at and accepting the FY1979 actual expenditures for education at each college. This served to establish the COE base figure, which has been adjusted in subsequent budgets. Going forward, the COE has been adjusted using various methods, as recommended by the executive budget office with review and approval by the legislature. There has been no universal inflationary adjustment measure applied over the 25 years the formula has been used, nor has there been any recalibration of the COE based upon a consideration of actual educational costs at the colleges.

The State Percentage Support factor is where the legislature applies public policy and ultimately determines the level at which state funding will support community college education costs. The funding statute requires that this percentage must be stated in HB 2 (not part of the statute) so that the legislature clearly exercises public policy each biennium by determining the precise percentage of the costs the state should support. That percentage in HB 2 has ranged from a high of 53 percent to a low of 46 percent during the 25 years it has been used, and it is this policy decision that determines the level of state funding.

It should be noted at this point that this three-factor formula only looks at and provides funding of that part of the community college budget known as the current unrestricted operating fund, supporting a percentage of the cost per FTE student. Historically, other funds at the community colleges have not been considered within the context of state funding through the three-factor formula. These include restricted funds such as federal grants, local voted mill levy revenue, and other funds raised by the college through alumni and foundation campaigns. While many of these funding sources are indeed integral to the educational/instructional mission of the colleges (such as federal Perkins funds that support technical equipment purchases and the adult education levy revenue) the legislative policy to keep these separate from the three-factor funding formula is a function of the commitment that "total institutional spending and the level of services to be provided should be made locally."[5] Therefore, state funding for the community colleges is targeted to and provides the foundation for the unrestricted operating fund, and restricted revenue is left to the sole control of the local trustees and the local taxpayers.[6]

The figure below illustrates the 25-year history of the three-factor funding formula, demonstrating how each fiscal year the three factors lead to the HB 2 appropriation level.

Figure 1
Community College Funding History
Three Factor Formula and HB2 Appropriations

Fiscal Year	Student Enrollment Projections	Cost of Education Factor (COE)	State Percentage Support	HB 2 Appropriation	HB2 Change From Prior Year	Additional Audit Funding	Additional Pay Plan Funding (Where Known)
1982 *	1,450	$3,155	53%	$2,493,459		$0	
1983 *	1,411	3,435	53%	2,643,923	6.03%	0	
1984	1,752	3,325	53%	3,087,462	16.78%	0	HB 902
1985	1,807	3,388	53%	3,244,721	5.09%	0	HB 902
1986	1,714	3,574	52%	3,185,435	-1.83%	24,960	$44,000
1987	1,714	3,611	52%	3,218,412	1.04%	0	136,000
1988	1,740	3,622	48%	3,025,094	-6.01%	25,920	0
1989	1,740	3,642	48%	3,041,798	0.55%	0	0
1990	1,733	3,907	47%	3,182,291	4.62%	25,380	0
1991	1,733	3,907	47%	3,182,291	0.00%	0	0
1992	1,841	4,031	49%	3,663,222	15.11%	31,110	0
1993	1,841	4,163	53%	4,062,612	10.90%	0	0
1994	2,060	4,163	49%	4,202,132	3.43%	29,890	0
1995	2,060	4,163	49%	4,202,132	0.00%	0	0
1996 **	Not Calculated	4,163	49%	5,177,461	23.21%	31,360	0
1997 **	Not Calculated	4,163	49%	4,400,607	-15.00%	0	0
1998	2,004	4,511	51%	4,610,625	4.77%	32,640	0
1999	2,004	4,511	51%	4,610,625	0.00%	0	0
2000	2,180	5,000	51%	5,559,000	20.57%	32,640	0
2001	2,180	5,000	51%	5,559,000	0.00%	0	0
2002***	2,030	5,267	53%	5,651,748	1.67%	33,920	0
2003***	2,040	5,267	53%	5,679,546	0.49%	0	0
2004	2,322	5,706	47%	6,205,139	9.25%	28,620	58,474
2005	2,369	5,706	46%	6,233,759	0.46%	0	126,014
2006	2,631	5,203	53%	7,255,219	16.39%	21,200	205,997
2007	2,770	5,203	53%	7,638,524	5.28%	0	464,993
Avg. Annual Change	2.62%	2.02%	N/A	4.58%	N/A	N/A	N/A

* For these years, HB2 figures represent actual appropriation, as Dawson received one-time-only higher COE factor to moderate impact of formula
** For these years, budget was calculated using incremental budget model, not three-factor formula, so enrollment figures were not calculated
*** For these years, HB2 differs slightly from three-factor calculation due to legislature removing approx. $16,000 to fund Baker Grants

HB2 Figures above exclude one-time-only funding

As the figure above illustrates, in addition to state funding to support the cost of education per FTE student at the state percentage level, the community colleges have also received a separate legislative appropriation as part of the state pay plan. The pay plan appropriation is calculated separately from the three-factor formula so that these funds provide support to the colleges over and above the three-factor formula. However the pay plan appropriation is also subject to the state percentage support level.

This pay plan bill appropriation is made in addition to the HB 2 funding in order to provide state support for the salary and benefit increases that are anticipated as part of the pay plan going forward into each fiscal year of that biennial budget. As will be discussed in the next section, however, the community colleges do not typically implement the state pay plan as other state agencies do, although the plan typically serves as a guideline for the colleges in making personal services adjustments and in negotiating labor union contracts.

The figure above also illustrates that most of the state funding increases since FY 1982 can be attributed to enrollment growth rather than an increase in the actual level of support for college operating costs. When you back out the enrollment growth factor in the table above, the actual HB 2 appropriation level increases an average of 1.91 percent per year during the 25-year history of the three-factor funding

formula. It should also be noted that most of the student enrollment growth has occurred at Flathead Valley Community College.

Once again, looking at the historical factors and the resulting state funding level as part of this overall model, the legislature, specifically the Joint Education Appropriations Subcommittee of the 2005 session, expressed support and satisfaction with the overall three-factor funding formula, but for concerns with the COE factor. These concerns are due to inconsistent biennial adjustments and other state fiscal policy decisions that may have caused the COE factor to lose relevance so that it may no longer reflect what it is intended to reflect: the cost of education at Montana community colleges.

ANALYSIS OF THE COST OF EDUCATION (COE) FACTOR

Is there a problem with the COE factor in the community college funding formula? Specifically, has the factor lost the relevance intended by the legislature when it was proposed in the 1981 funding study, adopted by the legislature and subsequently used in HB 2 calculations?

As discussed briefly above, the first legislative budget under the three-factor funding formula arrived at the COE factor by using the FY 1979 actual costs from the current unrestricted operating fund. That number, $2,490, established the original base for the COE factor and, going forward in subsequent biennia from that original base, the COE factor has been adjusted.

According to the research from each subsequent fiscal year budget, FY 1982 through FY 2007, there has been no consistent method or calculation to make fiscal adjustments to the COE factor.[7] For example, the following demonstrates some of the historical calculations used to adjust the COE factor:

- 1985 biennium budget adjusted the COE factor at 6 percent for inflation to the operations and maintenance component, but made no adjustment for personal services costs

- 1989 biennium budget adjusted the COE factor at the same inflation rates used in all state agency budgets, including a .92 percent adjustment for the state pay plan

- 1991 biennium budget adjusted the COE factor by $265 per year as part of the "Stephens'/Regent's" budget request; there is no fiscal correlation made as to how that $265 adjustment relates to actual costs

- 1997 biennium budget calculations did not actually use the three-factor funding formula (the executive had proposed moving the community colleges under total Board of Regent authority, but the legislature rejected that move). That budget used an incremental formula from the prior budget base. Once the incremental budget was derived, in order to comply with statute, the three-factor formula was backed into with the end result that the COE factor was not changed from the prior biennium

- 2007 biennium budget adjusted the COE factor by rebasing it downward, by $664 (in order to carry forward the 2002 special session reductions), then it was adjusted upwards by $161 to account for state pay plan adjustments in the FY 2004 base year

In reviewing just this partial history of the COE factor, it becomes apparent that what started with the FY 1979 base of the actual costs of education for Montana resident students at the community colleges

has become a factor that has little relevance to that cost. First, since the community colleges do not follow the state pay plan, making biennial adjustments based upon that pay plan has little relevance. Second, in the face of state economic and fiscal difficulties in 2001-2002, the COE factor was reduced in order to meet budget reduction targets. While the overall budget reduction was a matter of budget policy, to remove that target reduction from the COE factor bears no relation to the actual cost of education at the community colleges. Third, while the budgetary decision in the 1997 biennium to use an incremental budgeting process is, again, sound budget practice, the effect of that process to freeze the COE factor has no relation to the cost of education. Finally, while the 1991 biennium adjustment of $265 reflects a state policy to negotiate a budget between the Governor and the Regents, that budget negotiation result appears to have little correlation to the cost of education.

Based upon this history, therefore, it is a reasonable conclusion, as surmised during the 2005 session, that the COE factor in the community college funding formula has lost relevance, given its title, and does not appear to bear much relationship to the actual cost of educating Montana resident students at the three community colleges.

Bearing out this conclusion (that the COE factor is no longer a relevant figure) is a comparative between what HB 2 in the 2007 biennium states as the COE factor, which is $5,203, and the actual operating budgets for the community colleges, which indicate an average cost of education level of $6,133.

Taking comparative data further, the table below[8] demonstrates what the history of the COE factor would be if that factor had been adjusted in each biennial budget using one of a series of universal inflation indices.

Figure 2

Community College Cost of Education (COE) Factor

Actual Annual Adjustment Comparison to Other Inflationary Adjustment Indices

Fiscal Year	Cost of Education (COE) Factor		Annual % Change	CPI %	CPI Adjusted COE	PI %	PI Adjusted COE	PerCap PI %	PerCap PI Adjusted COE	Wage & Salary %	Wage & Salary Adjusted COE
Base	$2,490										
1982	3,155	*	8.21%	6.16%		5.44%		4.31%		2.77%	
1983	3,435	*	8.87%	3.21%	3,349	5.18%	$3,318	3.88%	$3,291.0	3.86%	$3,242.4
1984	3,325		-3.20%	4.32%	3,457	6.66%	3,490	5.77%	3,419	4.15%	3,368
1985	3,388		1.89%	3.56%	3,606	1.92%	3,723	1.73%	3,616	1.26%	3,507
1986	3,574		5.49%	1.86%	3,735	3.62%	3,794	4.71%	3,678	-1.18%	3,551
1987	3,611		1.04%	3.65%	3,804	2.97%	3,932	4.07%	3,852	2.46%	3,510
1988	3,622		0.30%	4.14%	3,943	1.83%	4,048	2.45%	4,009	5.78%	3,596
1989	3,642		0.55%	4.82%	4,106	10.03%	4,122	10.12%	4,107	4.87%	3,804
1990	3,907		7.28%	5.40%	4,304	5.59%	4,536	5.51%	4,522	6.50%	3,989
1991	3,907		0.00%	4.21%	4,536	6.89%	4,790	5.63%	4,771	6.39%	4,248
1992	4,031		3.17%	3.01%	4,727	5.42%	5,120	3.36%	5,040	7.28%	4,520
1993	4,163		3.27%	2.99%	4,870	7.78%	5,397	5.35%	5,209	6.45%	4,849
1994	4,163		0.00%	2.56%	5,015	2.48%	5,817	0.51%	5,488	5.53%	5,162
1995	4,163		0.00%	2.83%	5,144	4.55%	5,961	2.73%	5,516	4.80%	5,447
1996	4,163		0.00%	2.95%	5,289	4.95%	6,232	3.80%	5,667	5.64%	5,708
1997	4,163		0.00%	2.29%	5,445	4.79%	6,541	4.36%	5,882	4.84%	6,030
1998	4,511		8.36%	1.56%	5,570	6.61%	6,854	6.30%	6,139	5.66%	6,322
1999	4,511		0.00%	2.21%	5,657	2.74%	7,307	2.15%	6,525	4.53%	6,680
2000	5,000		10.84%	3.36%	5,782	6.94%	7,507	6.23%	6,666	6.31%	6,983
2001	5,000		0.00%	2.85%	5,976	7.93%	8,028	7.60%	7,081	4.97%	7,423
2002	5,267		5.34%	1.58%	6,147	2.16%	8,665	1.67%	7,619	4.68%	7,792
2003	5,267		0.00%	2.28%	6,244	5.49%	8,852	4.63%	7,746	4.94%	8,157
2004	5,706		8.33%	2.66%	6,386	6.42%	9,338	5.42%	8,105	5.81%	8,560
2005	5,706		0.00%		6,556		9,938		8,544		9,057
2006	5,203		-8.82%								
2007	5,203		0.00%								

Base = The base calculation to implement the formula was a calculation of FY1979 Actual Expenditures/FTE Student Enrollment

* This figures represents actual HB2 cost factor, as Dawson received a one-time-only higher figure to moderate impact of new formula

COE = Cost of Education per FTE student (as defined by MT state budget)

CPI = Consumer Price Index (U.S. City Average - All Items)

PI = Montana Personal Income Growth Rate

PerCap PI = Montana Personal Income Per Capita Growth Rate

Wage & Salary = Montana wage & salary Growth Rate

Data Source = U.S. Department of Commerce Bureau of Economic Analysis (Calendar Year Rates)

As the figure illustrates, had the original base year COE factor of $2,490 from FY 1979 been adjusted each biennium by using any of these standard inflationary indices, rather than the inconsistent adjustments that have actually been implemented, the COE factor in HB 2 by FY 2005 would be dramatically different than the actual figure that has driven the HB 2 appropriations. This comparison table is not intended to demonstrate that any particular index is ideal, but rather to demonstrate the significant variance between the existing COE factor and standard inflationary indices. Assuming that these indices each represent a statistical norm, it is apparent that the COE factor for the community colleges does not compare well to any of these statistical norms.

During the community college site visits, college staff and trustees also indicated that the COE factor as applied to student FTE enrollment essentially funds the unrestricted operating budget using only a variable costs model. Since the cost of education is funded solely based upon enrollment, this model assumes that the COE is driven only by the number of students and it ignores that a large percentage of community college costs are fixed costs, and expenditure levels remain essentially the same whether there is one student or one hundred students. By not contemplating the impact of fixed costs as part of the COE factor, the colleges are concerned that the factor, once again, is not entirely relevant to their actual costs.

Again, given that biennial adjustments to the COE factor have not been consistent, have not been referenced to other universal inflation indices, and have often been adjusted by calculations that have no relation to actual costs, it would appear that the current COE factor has lost relevance given its title. Potentially exacerbating the issue is the variable cost model that is used that does not contemplate fixed costs as part of the COE factor. Evidence of this disconnect is that HB2 lists the COE factor for FY 2005 as $5,203, while the community college operating budgets show an actual COE average of $6,128.

It should be noted here that while state budget reductions in the face of economic stagnation are an essential budget option, and that the other factors that lead to budget levels are critical to the state budget process, when these budgeting methods are applied to the three-factor funding formula they should, for statistical and numerical accuracy, result in an adjustment to the state percentage support factor, rather than the COE factor. Otherwise, the result is to make that COE an irrelevant budget factor given its title.

If there is a problem with the COE factor, identify the resulting problems and the consequences.

Given the evidence above, that the COE factor has indeed lost relevance as part of the community college three-factor funding formula, the following are among the resulting problems and consequences:

1) If the COE factor has lost relevance, then the factor no longer represents what its name implies and what was intended by the formula as devised in the 1981 legislative funding study. Therefore, what legislators believe they are doing under the three factor formula, making a public policy decision to fund a specific, stated percentage of the cost to educate Montana students attending community colleges, is not in fact what is being done. Rather, since the COE factor is no longer relevant to actual costs, it appears that legislators are funding a state percentage of an irrelevant number. One could argue that this lack of transparency thwarts the public policy goals that drive the community college funding assistance program in HB 2, as well as the statute at 20-15-301 MCA, etc. seq.

2) If the COE factor is not a genuine reflection of community college costs and is not adjusted in accordance with a consistent economic factor, this makes management of operations and fiscal controls problematic for community college trustees and college management. The lack of accuracy and predictability about the COE factor and the resulting state funding level creates fiscal management problems for each college, as the state funding calculation is virtually impossible for management to project if the COE factor, the foundation of the formula, has lost relevance and is subject to adjustment based on unforeseen and unrelated factors. This result, creating difficult fiscal management conditions for the local trustees, appears to conflict with the policy drivers of the three-factor funding formula that seeks to reinforce local control.

3) Finally, if the COE factor is not a genuine reflection of community college costs, thus contradicting its name, this creates a potential barrier between legislators and their constituents when discussing community college funding. This barrier, moreover, can engender distrust as college trustees and staff inevitably present local campus operating budgets that illustrate costs that are dramatically different than the figures identified by the legislature in HB 2. Therefore, the repercussions of this disconnect between the community colleges and the state funding formula also negatively affects the policy goal of transparency in the budget process.

COMPARATIVE STATE MODELS AND FUNDING LEVELS

While the number of models that drive state funding for community colleges is as diverse as the number of states, one common theme across the country is that many states are not satisfied with their funding models and are conducting research to determine better methods to fund community colleges. According to a study conducted in 2000, there were a number of states conducting funding studies to look at alternate models for community college support from state funding.[9] Driving many of these state funding model studies is a concern about equity within the system, that funding levels between the separate community colleges within each specific state are not equitable, and that this presents public policy problems in that state.

It appears from the research that the driver of this study in Montana, legislative concern about the validity of the COE factor in the funding model, is a unique concern. There does not appear to be any other state that is considering an adjustment or recalibration to a specific funding formula factor. According to a comprehensive state review of community college funding models conducted at the University of Florida, no other state is using a model like the Montana formula for funding community colleges.[10]

The most common community college funding model appears to be the incremental budget, which starts with a base funding level derived from actual expenditures and then makes incremental adjustments to this base level to reflect inflationary impacts, level of service changes, enrollment fluctuations, etc. Over and above this base-plus-adjustments level, the incremental budget model typically includes additional funding to support new initiatives or program expansions.

Seventeen states report that they use a specific funding formula to determine the level of state funding for community colleges. Of these seventeen, ten, including Montana, use a specific formula to determine both the state budget funding level as well as the allocation of those state funds to the individual community college campuses.

The state-funding model in Arizona is somewhat similar to the Montana funding formula, including the use of a COE factor. Unlike Montana, however, the Arizona budget takes the actual cost of education expenditures reported by the colleges and uses those actual levels to essentially "rebase" the funding formula in each budget cycle. Rather than make incremental adjustments to a base level COE factor using an inflationary index or projections, Arizona starts their funding formula with actual costs from the college operating budgets.

Other state funding models include the following:

- North Dakota uses an incremental base-plus-adjustments model that is not student FTE enrollment driven
- Wyoming recently moved to an FTE enrollment model, but internal equity concerns have led to another study that is likely to lead to changes to the current model

- South Dakota uses a very complex formula that considers course types (e.g. science vs. liberal arts), faculty salaries, and actual enrollments at the classroom level. Theses various factors are assigned cost values that roll up into the statewide funding level for each community college
- Alabama uses a funding formula to calculate the 3-year average state appropriation per FTE student for all institutions in the Southern Regional Education Board, and Alabama then funds their community colleges at the median funding/appropriation level of these regional peer institutions
- Florida uses a rather complex funding formula that contemplates factors such as class size, the specific number of full vs. part-time faculty, as well as a district cost differential to factor in a price index to reflect the specific cost differences that each community college has in their specific location in the state.

Therefore, based upon research and a review of state funding for community colleges in other states, there is no clear analogous model that provides Montana with a "best-practice" example or clear beacon to guide this study of the COE factor in the community college funding formula.

LEGISLATIVE OPTIONS

If one accepts the above assertion that the COE factor has indeed lost relevance and that the consequences of this create significant problems, then the next step would be to consider alternative models and options that can address these problems. In attempting to address the issues related to the COE factor, there are two variables to consider for alternative models:

- The method to establish a new base for the COE factor
- The method for adjusting that base in subsequent budget years going forward

Therefore, the following are a series of options that the legislature may want to consider to address problems with the COE factor in the community college funding formula.

OPTION ONE

Do nothing. The legislature may wish to maintain the current COE factor and the variable historical methods that have been used to adjust this factor in each biennial budget. While the COE factor has some problems, the actual results reflected in HB 2 appropriations have maintained a 4.58 percent average annual growth rate (though this is driven primarily by student enrollment increases of 2.62 percent) during the 25-year history of the formula (see Table 1 above), which appears to be a reasonable comparative to other inflationary indices. In addition, the formula and COE factor have allowed maximum budget policy discretion and flexibility in putting together 25 years of state budgets.

OPTION TWO

Rebase the COE factor in order to establish a new base figure, and consider recommending a specific method for adjusting this new base COE factor in each subsequent budget.

As stated above, the original COE factor was derived by adopting the actual expenditure level (an average of the three colleges) for the community college current unrestricted operating fund in FY 1979. If the legislature wishes to rebase the COE factor in order to see that it more accurately reflects the actual cost of education, the COE could be recalculated based upon the actual figures averaged across the community colleges for FY 2006, which will serve as the base year for the 2009 biennium budget. There are two rebasing models that could be considered by the legislature:

- Adopt the cost of education figures from the Commissioner of Higher Education (CHE) form 201, which each college is required to complete, as per statute, in establishing annual operating budgets. CHE 201 includes a separate accounting schedule for the current unrestricted operating funds, segregating these funds from others, including restricted, auxiliary, and capital funds. According to CHE 201, the projected COE factor for FY 2006 is $6,133 if an average cost is used, and it is $6,083 if a weighted average cost is used. The COE factor in HB 2 for FY 2006 is currently $5,203. The figure below illustrates the detailed results from the CHE 201 form:

Figure 3

Community College	Fiscal 2005 Actual COE Per Student	Fiscal 2006 Projected COE Per Student
Dawson	$5,932	$5,556
Flathead Valley	6,057	5,977
Miles	6,479	6,865
Average COE	$6,156	$6,133
Weighted Average COE	$6,128	$6,083

- Adopt the "Methodology for Identifying the Cost of Delivering Undergraduate Education" as devised by the National Association of College and University Business Officers (NACUBO). The NACUBO formula was specifically developed for this purpose, to provide public policy makers with a transparent mechanism to determine the cost of education at any type of higher education institution. In a test run of the formula performed as part of each community college site visit, the formula was transparent and adaptable to each college operations. The formula essentially has each college allocate costs to various educational functions (e.g. instruction, student services, library, etc.), these are totaled and allocated by the number of FTE students. For more detail, attached is an example of the NACUBO form.[11] There would need to be a set of universal definitions devised, however, to assure equalized application. According to the test run of the NACUBO formula, the projected COE factor for FY 2006 is $8,486 if an average cost is used, and it is $8,442 if a weighted average cost is used.

    - It should be noted that the NACUBO formula includes some costs related to capital expenditures. Under Montana statute, state funding cannot be used to support capital costs, so that if the legislature considers the NACUBO formula, the capital costs calculation would need to be backed-out of the formula or statute would need to be changed.

    - It should also be noted that the NACUBO formula includes federal revenue that the CHE 201 does not count, as these are considered "restricted funds" under current fiscal policy of the community colleges. The advantage to including these federal costs would be that it provides a more complete calculation of the total costs of education at each community college. The exclusion of federal funds, as part of restricted revenue, is related to the policy goal of maximizing local control through the opportunity for local trustees to implement a voted tax levy on the local community. Including federal revenues in this component of the state budget calculation does not appear to impinge upon that local control policy goal. It should be noted, that if the legislature considers the NACUBO

formula these additional federal funds would need to be considered in order to explain a higher COE factor in making historical comparisons. Most important, however, including federal funds (restricted revenues) in the COE factor calculation may require an amendment to the community college funding statute (20-15-301 MCA, et. seq.).

In considering these two options for rebasing the COE factor, it is apparent that adopting the CHE 201 form would eliminate the possibility of changing statute and eliminate the need for adjusting the formula, as the NACUBO option presents. It should also be noted that the CHE form 201 option has the advantage of having an extended historical function within the Montana University System and the community colleges. It is already well understood by all parties.

Separate from the calculation to rebase the COE factor is consideration of recommending a method to adjust the base going forward in subsequent biennial budgets. There are a number of adjustment models that the legislature may want to consider, including the following:

- Do nothing and make no specific recommendation on an adjustment method, thus allowing the past practice of executive budget recommendation and legislative review, consideration of amendment, and approval each biennium.

- Recalculate the base each biennium, using one of the above models, thus eliminating the need to make an adjustment calculation of the base COE factor. Under this model the budget process essentially becomes a "zero-based" model rather than a base plus incremental adjustments model.

- Recommend an adjustment to the COE base factor from among the universal inflationary indices:

    - Consumer Price Index U.S. cities average (CPI). While this index has the advantage of being a very broad, universal inflationary adjustment index, it also includes calculations for household items that may not be most appropriate for adjusting community college education costs. Note from the above Table 2 that the CPI adjusted COE in 2005 is $6,556 compared to the $5,706 actual COE factor in HB 2.
    - Montana Personal Income Growth rate (PI). While this index eliminates the calculation of household goods and brings a closer correlation to community college costs, given that approximately 80 percent of the cost of education is related to personal services, personal income calculations include returns from investment and capital gains. These factors have no bearing on community college costs. Note from the above Table 2 that the PI adjusted COE in 2005 is $8,938 compared to the $5,706 actual COE factor in HB 2.
    - Montana Personal Income Per Capital Growth rate (PerCap PI). This index is identical to the above PI rate, but for applying the growth to all Montana residents, including those who are not in fact earning income, such as minors. Note from the above Table 2 that the PerCap PI adjusted COE in 2005 is $8,544 compared to the $5,706 actual COE factor in HB 2.
    - Montana Wage & Salary Growth rate (Wage&Salary). This index has the advantage that it reflects what workers in the Montana workforce are actually paid, as it eliminates income for investments and capital gains, and recall that approximately 80 percent of the community college costs are related to personal services. Note from the above Table 2 that the Wage&Salary adjusted COE in 2005 is $9,057 compared to the $5,706 actual COE factor in HB 2.

OPTION THREE

Rebase the COE factor, using one of the above models, in order to establish a new base figure, but also include a calculation that establishes both a fixed cost of education component and a variable cost of education component, which, together, would comprise the new COE factor. Then consider recommending a specific method for adjusting this new base COE factor in each subsequent budget, selecting from the above adjustment options.

Should the legislature select this option, a fixed vs. variable cost model for the COE factor, it is recommended that the working group be charged to work with the community colleges to establish a transparent and logical formula to define which expenditures in their budgets are fixed and which are variable. In a preliminary discussion with the fiscal staff of the colleges, there was speculation that fixed costs comprise approximately 60 percent of the total expenditure budget. All colleges agreed that a transparent formula could be achieved.

Stated mathematically, this formula would look like the following:

- [(Student Enrollment x Variable Cost of Education) + Fixed Cost of Education] x State Percent Share = State General Fund Budget
  e.g. [(100 Students x $40 Variable Cost Per Student) + $6,000 Fixed Cost] x 53% State Share = $5,300 General Fund Budget)

Under this option, the legislature may want to request a legal opinion from legislative staff to determine how this change to the formula, specifically establishing a fixed COE that would not be applied to the FTE student enrollment factor, would require a statute change. Specifically, how would 20-15-312 MCA need to be amended and whether the Legislative Finance Committee would like to request a bill draft for the 2007 legislative session to make this change to statute. This is the statute that governs the calculation of the community college appropriation through the three-factor funding formula. The addition of a fixed costs factor will require an amendment to that statute.

This option would best address the additional concerns that have been raised about the COE factor not being an accurate reflection of community colleges costs in that it assumes that all expenditure levels are driven by the enrollment FTE count. The colleges consider this to be the preferred option.

REGULAR FORMULA REVIEW IN ALL LEGISLATIVE OPTIONS

Should the legislature select one of the above options to address concerns with the COE factor, an additional consideration may be to also recommend a regular review of all aspects of the community college funding formula. In particular, if an option is selected to make a biennial adjustment to the COE factor, rather than calculating that factor through a biennial rebasing model, it may be important to place a standing request on an interim legislative committee, perhaps the Legislative Finance Committee (LFC) or the Post Secondary Education Policy and Budget subcommittee (PEPB), to thoroughly review the formula on a regular basis, perhaps every third biennium. Such a recommendation may help address any mathematical anomalies that can result from any funding formula as well as help ensure that the public policy goals of the formula remain intact.

ADDENDUM:

COMMUNITY COLLEGE STRUCTURE AS PART OF STATE GOVERNMENT

In the course of completing this report, both the research component and the site visits at each college, a couple of issues were raised that do not bear upon the purview of this study but seemed to warrant mention in this report for potential future legislative consideration. These include:

- The community college funding statute (codified at 20-15-301 MCA, et. seq.) does not allow state funding to support any capital construction costs at the colleges. The historical justification for this policy appears to be keeping the costly decisions of capital expenditures at the local level, subject to maximum oversight by local trustees and local taxpayers. On the other hand, high capital costs may prevent local communities from making improvements that may affect the quality of education. The legislature may want to consider a more detailed look into the capital expenditure component of the funding statute, including a look at whether a matching funds formula for capital costs merits consideration.

- Within the context of postsecondary education, two-year degree programs are growing in importance in the "new economy" that seems to require at least some higher education to be competitive in the workforce. As a result of this economic and higher education paradigm shift, virtually all postsecondary education institutions are expanding the offerings in the area of two-year degree programs. This is putting additional stress and pressure on the community colleges who may begin to see themselves increasingly competing for students not only with peer institutions in other states, but also competing for students with the flagship institutions of the Montana University System. This is primarily a perception at the eastern-Montana schools, where student recruitment and enrollment is increasingly competitive due to shrinking populations and targeted competition from North Dakota schools. There is some concern, therefore, that the distinction between community colleges and the university units is beginning to blur, and given that the legislature provides a significant level of educational funding for the community colleges, legislators may want to investigate the implications of this two-year education paradigm shift in more depth.

- An emerging trend in state budgets for community colleges is the introduction of performance measures by state government in order to clearly define the state interest in funding and clarify to community colleges what outcomes the legislature wishes to see in return for state support. According to State Funding for Community Colleges: A 50-State Survey [12], twenty-seven states require community colleges to report on specific performance indicators, and ten of these states link state funding levels to these performance indicators and progress made each budget cycle. The most common performance indicators include:
  - Job Placement Rates of Graduates
  - Transfer Rates to 4-Year Institutions
  - Graduate Rates (with a degree, professional certification, etc.)
  - Workforce Development Needs of Local Businesses

  While historically in Montana there have been no performance measures applied to the community colleges in the state budget as part of the funding formula, this may be an issue that the legislature would like to consider for future options.

- In accordance with 17-7-142 MCA, if student enrollment falls short of the projections, the community colleges must revert, or give back, the general fund appropriation that exceeds their actual enrollment in a fiscal year. The public policy behind this reversion provision appears to be an attempt to discourage inflated enrollment projections and encourage a careful, accurate projection of student FTE enrollments. From a fiscal and management perspective, however, when projections are not met and a reversion is required, this can create, according to college officials, grave fiscal implications because actual expenditures in a fiscal year are not totally driven by the variable costs associated with student enrollment. Therefore, when a reversion is required due to fewer student FTE, it is not typical that the college will experience an actual expenditure decrease. This situation is an additional motivator for Legislative Option Three above, the implementation of a fixed and variable cost funding model. Should the legislature not adopt this model, however, the reversion statute and its actual fiscal impact is a matter that the legislature may want to consider in the future.

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[1] Community College Funding Study: Final Report, Submitted by: The Legislative Finance Committee, July 1981.
The three factor or "unit-rate" model involves multiplying three factors in order to determine the general fund budget for each community college:

- Cost of Education for each student FTE at each college (COE factor)
- Enrollment Projections at each college (FTE Students)
- State Percentage Share of support of the Cost of Education

GENERAL FUND BUDGET = COE Factor x FTE Students x State % Share

The State Percentage Share is the factor where the legislature applies public policy…as this percentage must be stated in HB 2 (not part of the statute) so that the legislature exercises public policy by determining what percentage of the costs the state should support (Page 14 of 1981 Report)…that percentage has ranged from 53% to 48% during the 25 years it has been used. Therefore, regardless what the COE factor may be, the legislature sets the funding level and determines public policy by setting the State Percentage Share in HB 2.

[2] The Legislative Finance Committee (LFC) appointed Senator Rick Laible and Senator Carol Williams to provide staff oversight and direction during this study and the writing of the subsequent report.

[3] Mark Bruno, Budget Analyst, represented the Governor's Office of Budget and Program Planning, and Pam Joehler, Accounting & Budget Director, represented the Office of the Commissioner of Higher Education.

[4] Dawson Community College in Glendive site visit was held on Wednesday, October 12, 2005.
Miles Community College in Miles City site visit was held on Thursday, October 13, 2005.
Flathead Community College in Kalispell site visit was held on Monday, October 31 and Tuesday, November 1, 2005.

[5] Community College Funding Study: Final Report, Submitted by: The Legislative Finance Committee, July 1981, page 4.

[6] Community college officials point out that subsequent property tax reform and statute changes made by the legislature in 1989 and 2001 may have effectively shifted control of even the local mill levy revenue from the local college trustees to the legislature, thus thwarting the original legislative policy intent of the three-factor funding formula.

[7] See Legislative Fiscal Report, published by the Legislative Fiscal Division, for each biennium budget starting with the 1983 biennium through the 2007 biennium.

[8] This chart is intended to provide a historical comparison between the **actual** HB 2 COE factor since 1982 and the resulting historical COE factor if other common inflationary indices had been used to make annual adjustments. Therefore, for each of the selected indices, the annual percentage rate is displayed beside the resulting adjusted COE for that year, had that index adjustment been used. This illustration is intended for informational purposes only and is not intended to serve as an endorsement for any of the indices displayed.

[9] State Funding for Community Colleges: A 50-State Survey, November 2000, published by the Education Commission of the States (ECS) and written by the Center for Community College Policy Education Commission of the States (Denver, CO).

[10] An interview with Chris Mullin, graduate fellow at the University of Florida, who is conducting a comprehensive community college funding study to support the publication of a paper in mid-2006 for the American Education Finance Association (CMullin@ufl.edu).

[11] See table below, which is a test-run example from Flathead Valley Community College, based upon projected FY2006 expenditures. Note the various expenditure categories:

NACUBO Cost of College Project

Annual Undergraduate Educational Costs Per Student Reporting Template

1. General Institution Information

Institution Name and Carnegie Class:	Flathead Valley Community College
Contact Name	Sheila Gestring
Contact Title	Chief Financial Officer
Contact Phone	(406) 756-3808
Contact e-mail	sgestrin@fvcc.edu

Institution Type: [X] Public [ ] Private

Fiscal Year Reported: 2006 projected

Price Per Student: $2,348.50

FTE used in this report:

Basis of FTE count: [ ] preferred method [X] other method (describe) 30 credit hours=FTE

Number of FTE undergraduate students 1,480

Number of FTE graduate students *(not weighted)*

Did you weight graduate students in this FTE count? [X] no [ ] yes

If yes, indicate weighting factor used [ ] 25% [ ] other (indicate weighting)

Category	Cost per Undergraduate
2. Instruction and Student Services	
a. Instruction	$ 3,469
b. Departmental Administration	570
c. Student Services	1,394
d. Library	139
e. Allocated O. and M. Expenses	695
f. Allocated Depreciation: Facilities	302
g. Allocated Depreciation: Equipment	
h. Allocated Administration (G&A)	1,825
i. Subtotal: *Instruction and Student Services Costs*	$ 8,394
3. Institutional and Community Costs	
a. Cultural, Religious Life and Recreation	$ 107
b. Museums, Gardens, etc.	
c. Net Cost of Intercollegiate Athletics	17
d. Net Cost of Other Auxiliary Operations	
e. Other (Specify)	
f. Allocated Facilities O&M Expenses	5
g. Allocated Depreciation: Facilities	2
h. Allocated Depreciation: Equipment	
i. Allocated Administration (G&A)	14
j. Subtotal: *Institutional and Community Costs*	$ 145
4. Undergraduate Financial Aid Costs	
Institutional Resources	$ 326
5. Total and Recap of Costs by Component	
a. Instruction and Student Services Costs	$ 8,394
b. Institutional and Community Costs	$ 145
c. Financial Aid Costs	$ 326
d. *Total Costs:*	$ 8,865

Addendum: Facilities Capital Costs:		
A. Book value of all facilities		$ 7,051,905
B. Estimated replacement value of all facilities		$ 11,671,129
C. Portion of line B applicable to education	100%	$ 11,671,129
D. Portion of line C applicable to undergraduates	100%	$ 11,671,129
E. Divide line D result by number of undergraduates reported above		$ 7,886

12 Op. Cit, State Funding for Community Colleges: A 50-State Survey, November 2000.